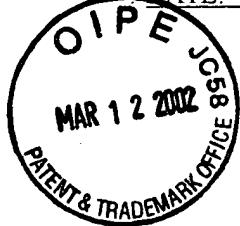


CERTIFICATE OF MAILING PURSUANT TO 37 C.F.R. §1.8

I hereby certify that this correspondence, pursuant to 37 C.F.R. §1.8, is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents and Trademarks, ART UNIT 2832, Washington, D.C. 20231, on:

DATE: March 6, 2002

BY: Julie A. Eslick



INFORMATION DISCLOSURE STATEMENT PURSUANT TO
37 C.F.R. §§1.97-1.98

PATENT APPLICATION

Applicant(s):	Jun Shen, et al.	Docket No.:	12218.1600
Serial No.:	10/051,447	U.S. Filing Date:	January 18, 2002
Group Art Unit:	2832	Examiner:	To be assigned
TITLE:	MICRO-MAGNETIC LATCHING SWITCH WITH RELAXED PERMANENT ALIGNMENT REQUIREMENTS		

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure under 37 C.F.R. §1.56 and pursuant to 37 C.F.R. §§1.97-1.98, the reference or references listed and identified on the attached PTO-1449 based form are being submitted herewith for consideration by the Examiner. A copy of the listed reference is included herewith.

The reference or references are being cited only in the interest of candor and without any admission that they constitute statutory prior art or contain matter which anticipates the invention or which would render the same obvious, either singly or in combination, to a person of ordinary skill in the art.

This Information Disclosure Statement (IDS) is being filed under 37 C.F.R. §1.97(b)(3) as each item of information contained in this disclosure is being filed prior to the issuance of a first Office Action on the merits, and therefore no fee or statement is required.. Some of the references cited in this disclosure were also disclosed in a communication from a foreign patent

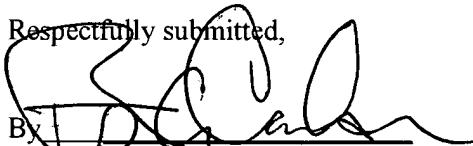
RECEIVED
MAR 14 2002
PTO 2800 MAIL ROOM

Serial No.: 10/051,447
Title: MICRO-MAGNETIC LATCHING SWITCH
WITH RELAXED PERMANENT ALIGNMENT
REQUIREMENTS

office in a counterpart foreign application. If Applicant has overlooked any fees, the Commissioner is hereby authorized to debit Deposit Account No. 19-2814 for the same. **A duplicate copy of this Information Disclosure Statement is enclosed for this purpose.**

If there are any questions concerning this IDS, the Examiner is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the United States Patent and Trademark Office is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 19-2814.

Date: 3/5/02

Respectfully submitted,
By: 
Brett A. Carlson
Reg. No. 39,928

Enclosures: PTO-1449
Patent copies

SNELL & WILMER L.L.P.
One Arizona Center
400 East Van Buren
Phoenix, AZ 85004-0001
P: (602) 382-6236
F: (602) 382-6070

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.

12218.1600

SERIAL NO.

10/051,447

APPLICANT(S)

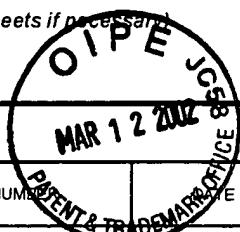
Jun Shen, et al.

FILING DATE

January 18, 2002

GROUP

2832



U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,818,316	10/06/1998	Shen, et al.			
	5,847,631	12/08/1998	Taylor, et al.			
	5,629,918	05/1997	Ho, et al.			
	5,475,353	12/1995	Roshen, et al.			
	5,398,011	03/1995	Kimura, et al.			
	5,472,539	12/05/1995	Saia, et al.			
	6,094,116	07/25/2000	Tai, et al.			
	4,570,139	02/11/1986	Kroll			
	6,124,650	09/2000	Bishop, et al.			
	6,016,092	01/2000	Qiu, et al.			
	5,016,978	05/21/1991	Fargette, et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	06251684 A	09/09/1994	Japan				
	0 780 858 A	06/25/1997	EPO				
	97 39468 A	10/23/1997	WO				
	98 34269A	08/06/1998	WO				
	0 869 519 A	10/07/1998	EPO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		Ching H. Ahn and Mark G. Allen, "A Fully Integrated Micromagnetic Actuator With a Multilevel Meander Magnetic Actuator With a Multilevel Meander Magnetic Core", June 1992, IEEE Solid-State Sensor and Actuator Workshop, pp. 14-17
		William P. Taylor and Mark G. Allen, "Integrated Magnetic Microrelays: Normally Open, Normally Closed, and Multi-Pole Devices", June 1997, IEEE International Conference on Solid-State Sensors and Actuators, pp. 1149-1152

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION <small>(Use several sheets if necessary)</small>			ATTY DOCKET NO. 12218.1600	SERIAL NO. 10/051,447		
			APPLICANT(S) Jun Shen, et al.			
			FILING DATE January 18, 2002	GROUP 2832		
			U.S. PATENT DOCUMENTS			
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,838,847	11/17/1998	Pan, et al.			
	5,945,898	08/31/1999	Judy, et al.			
	6,028,689	02/22/2000	Michalicek, et al.			
	6,084,281	07/04/2000	Fullin, et al.			
	6,143,997	11/07/2000	Feng, et al.			
	4,461,968	07/1984	Kolm, et al.			
	6,160,230	12/2000	McMillan, et al.			
	4,065,677	12/1977	Micheron, et al.			
FOREIGN PATENT DOCUMENTS						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
	99 27548 A	06/03/1999	WO			YES
	19 820821 C	12/16/1999	DE			NO
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)						
		Jack W. Judy and Richard S. Muller "Magnetically Actuated, Addressable Microstructures", September 1997, Journal of Microelectromechanical Systems, Vol. 6, No. 3, September 1997, pp. 249-255				
		John A. Wright and Yu-Chong Tai, "Micro-Miniature Electromagnetic Switches Fabricated Using MEMS Technology", 46th Annual International Relay Conference: NARM '98, April 1998				
EXAMINER			DATE CONSIDERED			
<small>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>						

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				ATTY DOCKET NO. 12218.1600		SERIAL NO. 10/051,447	
				APPLICANT(S) Jun Shen, et al.		FILING DATE January 18, 2002	
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL	DOCUMENT NUMBER & TRADEMARK NOTICE	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
FOREIGN PATENT DOCUMENTS							
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>							
	John A. Wright, Yu-Chong Tai and Gerald Lilienthal, "A Magnetostatic MEMS Switch for DC Brushless Motor Commutation", Solid State Source and Actuator Workshop 1998, June 1998						
	Laure K. Lagorce, Oliver Brand, and Mark G. Allen, "Magnetic Microactuators Based on Polymer Magnets", IEEE Journal of Microelectromechanical Systems, Vol. 8, No. 1, March 1999, pp 2-9						
EXAMINER				DATE CONSIDERED			

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)			ATTY DOCKET NO.	SERIAL NO.			
			12218.1600	10/051,447			
			APPLICANT(S) Jun Shen, et al.				
FILING DATE January 18, 2002		GROUP 2832					
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL	DOCUMENT NUMBER	PATENT & TRADEMARK OFFICE DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
FOREIGN PATENT DOCUMENTS							
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
			Richard P. Feynman, "There's Plenty of Room at the Bottom", 12/29/59, pp. 1-12, Internet Source: http://www.zyvex.com/nanotech/feynman.html				
			William Trimmer, "The Scaling of Micromechanical Devices", Sensors and Actuators, Vol 19, No. 3, September 1989, pp. 267-287, taken from the Internet Source: http://home.earthlink.net/~trimmerw/mems/scale.html				
EXAMINER			DATE CONSIDERED				

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



Docket Number (Optional)	12218.1600	Application Number	10/051,447
Applicant(s)	Jun Shen, et al.		
Filing Date	January 18, 2002	Group Art Unit	2832

*EXAMINER
INITIAL

OTHER DOCUMENTS (Include Name, Title, Date, Pertinent Pages, Etc.)

	William P. Taylor, Oliverry Brand, and Mark G. Allen, "Fully Integrated Magnetically Actuated Micromachined Relays", Journal of Microelectromechanical Systems, Vol. 7, No. 2, June 1998, pp. 181-191
	John A. Wright, Yu-Chong Tai, and Shih-Chia Chang, "A Large-Force, Fully-Integrated MEMS Magnetic Actuator", 1997 International Conference on Solid-State Sensors and Actuators, Chicago, June 1997, pp. 793-796
	Tilmans, et al., "A Fully-Packaged Electromagnetic Microrelay", IEEE 1999, pp 25-30
	Xi-Qing Sun, KR Farmer, and WN Carr, "A Bistable Microrelay Based on Two-Segment Multimorph Cantilever Actuators", 1998 IEEE, pp. 154-159
	Ezekiel JJ Kruglick and Kristofer SJ Pister, "Bistable MEMS Relays and Contact Characterization", Hilton Head 98 and 19th International Conference on Electric Contact Phenomena, 5 pgs.
	"Ultraminiature Magnetic Latching To-5 Relays SPDT DC to C Band", Series RF341, product information from Teledyne Relays, 1998

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and considered. Include copy of this form with next communication to applicant.